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TITLE: BROADCAST RECEIVER  
AND DIGITAL BROADCASTING METHOD

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ABSTRACT:

PROBLEM TO BE SOLVED: To provide a broadcast receiver capable of receiving an analog broadcast without any troublesome operation if it is difficult to receive a digital broadcast of the same program.

SOLUTION: A broadcasting station puts information regarding whether an analog broadcast and a digital broadcast of the same program are being broadcasted by simulcasting, and sends them. A receiver 30 receives and holds the information in a memory 14. In the case of C/N deterioration, the receiver 30 reads the information regarding the simulcasting out of the memory 14 and controls a BS analog tuner 17 to receive the same program of the analog broadcast of simulcasting. Then, a switching signal is sent out to a signal switching circuit 19 to output the video and sound of the same program of the analog broadcast.

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## Broadcasting receiver

## Abstract

There are provided an analog tuner for receiving analog broadcasting and a digital tuner for receiving digital broadcasting. An EPG decoder extracts EPG data in analog broadcasting, and a demultiplexer extracts EPG data in digital broadcasting. A CPU receives each of the EPG data, to judge whether or not the same program is being broadcast in analog broadcasting and digital broadcasting (whether or not there is simulcast). The CPU produces, when analog broadcasting in simulcast is being received, a message that the same program is being broadcast in digital broadcasting by an OSD circuit and displays the produced message on a screen (a CRT).

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### *Foreign Application Data*

Date	Code	Application Number
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*Claims*

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What is claimed is:

1. A broadcasting receiver comprising: an analog broadcasting receiving unit for receiving analog broadcasting; a digital broadcasting receiving unit for receiving digital broadcasting; means for acquiring information as to whether or not the same program is being broadcast in analog broadcasting and digital broadcasting, to judge whether or not there is simulcast; and means for displaying on a screen a message that the same program is being broadcast in digital broadcasting when analog broadcasting in simulcast is being received.
2. The broadcasting receiver according to claim 1, wherein digital broadcasting in simulcast is received when a predetermined key is operated in a state where said message is displayed.
3. A broadcasting receiver comprising: an analog broadcasting receiving unit for receiving analog broadcasting; a digital broadcasting receiving unit for receiving digital broadcasting; means for acquiring information as to whether or not the same program is being broadcast in analog broadcasting and digital broadcasting, to judge whether or not there is simulcast; and means for switching, in a case where analog broadcasting in simulcast is being received, the receiving of analog broadcasting in simulcast to the receiving of digital broadcasting in simulcast when a predetermined key is operated.
4. In a broadcasting receiver configured such that a channel can be changed by comprising a channel UP/DOWN key, a broadcasting receiver comprising an analog broadcasting receiving unit for receiving analog broadcasting; a digital broadcasting receiving unit for receiving digital broadcasting; means for acquiring information as to whether or not the same program is being broadcast in analog broadcasting and digital broadcasting, to judge whether or not there is simulcast; and means for erasing an analog channel on which analog broadcasting in simulcast is being performed at the present time on the basis of an internal clock from a list in said channel UP/DOWN key.

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*Description*

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## BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The present invention relates to a broadcasting receiver that can receive both digital broadcasting and analog broadcasting.

[0003] A digital broadcasting receiver that receives digital broadcasting using a satellite or a terrestrial wave selects an arbitrary broadcasting wave out of a plurality of broadcasting waves which are received through a dedicated antenna or a terrestrial wave antenna using a tuner, selects an arbitrary channel out of a plurality of channels included in the selected broadcasting wave using demultiplex processing, extracts a digital signal on the selected channel, and decodes the extracted digital signal, to output a video/audio signal.

[0004] Meanwhile, it seems that broadcasting enterprisers have more frequently employed simulcast for broadcasting the same program in terrestrial digital broadcasting and terrestrial analog broadcasting, for

example. In this case, it is considered that broadcasting is performed by SD (Standard Definition Television) and HD (High Definition Television) in terrestrial digital broadcasting, so that programs of higher image quality can be watched in digital broadcasting, as compared with those in analog broadcasting. Some broadcasting receivers are so configured that in a case where the same program is being broadcast using simulcast in analog broadcasting and digital broadcasting, the receiving of digital broadcasting is automatically switched to the receiving of analog broadcasting when the receiving level is below a predetermined level while a digital broadcasting program is being viewed (see JP-A-2001-211126).

[0005] In such a configuration in which both a digital broadcasting wave and an analog broadcasting wave can be received, however, the same program as an analog broadcasting program currently received is being broadcast in digital broadcasting, and a user may continue to watch the analog broadcasting program of lower image quality without knowing that the same program is being broadcast in digital broadcasting. Particularly, such situations easily occur when a user views a program while channel-hopping from one to another without depending on an EPG screen.

## SUMMARY OF THE INVENTION

[0006] In view of the foregoing circumstances, an object of the present invention is to provide a broadcasting receiver capable of urging a user to view a digital broadcasting program as much as possible in a case where the same program is being broadcast using simulcast in analog broadcasting and digital broadcasting.

[0007] In order to solve the above-mentioned problem, a broadcasting receiver according to the present invention is characterized by comprising an analog broadcasting receiving unit for receiving analog broadcasting; a digital broadcasting receiving unit for receiving digital broadcasting; means for acquiring information as to whether or not the same program is being broadcast in analog broadcasting and digital broadcasting, to judge whether or not there is simulcast; and means for displaying on a screen a message that the same program is being broadcast in digital broadcasting when analog broadcasting in simulcast is being received.

[0008] In the above-mentioned configuration, the message that the same program is being broadcast in digital broadcasting when analog broadcasting in simulcast is being received is displayed on the screen. Therefore, situations where a user continues to view the program in analog broadcasting without noticing digital broadcasting in simulcast can be prevented as much as possible.

[0009] When a predetermined key is operated in a state where the message is displayed, the broadcasting receiver may be so configured that digital broadcasting in simulcast is received.

[0010] A broadcasting receiver according to the present invention is characterized by comprising an analog broadcasting receiving unit for receiving analog broadcasting; a digital broadcasting receiving unit for receiving digital broadcasting; means for acquiring information as to whether or not the same program is being broadcast in analog broadcasting and digital broadcasting, to judge whether or not there is simulcast; and means for switching, in a case where analog broadcasting in simulcast is being received, the receiving of analog broadcasting in simulcast to the receiving of digital broadcasting in simulcast when a predetermined key is operated.

[0011] Even when a user is viewing an analog broadcasting program, the user may, in some cases, think "if simultaneous broadcasting is being performed in digital broadcasting, I want to view a digital broadcasting program". In such a case, if there is a digital broadcasting program in simulcast, a channel is automatically switched so as to receive the digital broadcasting program only by operating the predetermined key.